Variables:-

Variables are used to store data values that can be used & changed in a Program.

Key Points:-

A variable is like a container that holds information.

Why Variables are used

- To Store data temporarily
- To reuse & manipulate data
- To make Programs dynamic

Valid Variables declaration:-

```
a = 5
b = 10
num = 5
name = "chidrup"
```

Invalid Variables declaration:-

```
1c = 12
#emp_name = "kamala"
emp_sal = 5000
```

Rules
- must start with a letter or underscore
- cannot start with a number
- No spaces allowed
- should not use reserved keywords

Data Types:-

A data type is a classification that define the type of value stored in a variable.

Single Valid Variable:

A single valid variable is a correctly written variable name that follows Python's rules for naming variables.

☆ int, float, boolean, complex, string.

multi Valid Variables:

A multi-valued variable data type is a data type that can store multiple values in a single variable.

- List, Tuple, Set, Dictionary, string.

Operators :—

operators are symbols used to perform operations on variables & values in Python.

* operators & tells python what action to perform.

Types of operators :-

1> Arithmetic operators → + , - , *, / , ./. , ** , //

2> Logical operators → And , OR , NOT

3> Relational / comparison operator → == , != , > , < , >= , <=

4> Assignment operator → = , += , -= , *= , /=

5> Bitwise operators → & , ᴸ , ^ , ~ , << , >>

6> membership operators → in , not in

7> Identity operators → is , is not

Arithmetic operator :-

write a program to perform basic calculator operation using
2 values

```
a = int (input())
b = int (input ())

c = a+b    print (c)
d = a-b    print (d)
e = a*b    print (e)
f = a/b    print (f)
g = a % b  print (g)
h = a ** b print (h)
```

output :-

5, 4

c = 9
d = 1
e = 20
f = 1.25
g = 1
h = 625